Video Cassette Recorder

VR200/01

VR200/59

Service
Service
Service

Service Manual

Für Technische Daten siehe Service Manual von VR201. In dieser Dokumentation sind nur die Unterschiede enthalten.

Versionsübersicht :

VR200/01	PAL	BG
VR200/59	PAL/SECAM	BG/DK

Fernbedienungsübersicht :

VR200/01	RT102/101	4822 218 30545
VR200/59	RT101/704	4822 218 30561

Laufwerksübersicht :

VR200 : JDM 2/0 (2 Kopf)

Laufwerksdokumentation :
IDM 4822 726 14712
(inkl. Service Information VR90-05D)

Übersicht der Geräte und Printplatten
Survey of sets and CBA's

	Power supply JSM	Operating panel JDCA	Signal panel PMS	Headamplifier HVC2/0	Familyboard JFB1/01	-I/O Input/Output	-FE Front-end	-AUD Linear audio JFB1/59	-DE Servo	Tapedeck JDM2/0
VR200/01	•	•	•	•		•				•
VR200/59	•	•	•	•				•		•

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden, für Reparaturen sind Original-Ersatzteile zu verwenden.

For the technical data reference is made to the VR201 Service Manual . The present Manual only states the differences.

Survey of types :

VR200/01	PAL	BG
VR200/59	PAL/SECAM	BG/DK

Survey of remote controls :

VR200/01	RT102/101	4822 218 30545
VR200/59	RT101/704	4822 218 30561

Survey of tape decks :

VR200 : JDM 2/0 (2 Kopf)

Tape deck dokumentation :
IDM 4822 726 14711
(incl. Service Information VR90-05GB)

Unterschiede/ differences :

1.) Blatt :	3-4	JDCA,	Printzeichnung
Page :	3-4	JDCA,	drawing
	3-5	JDCA,	Prinzipschaltbild
		JDCA,	Einstellungen
	3-5	JDCA,	circuit diagram
		JDCA,	adjustments
	4-3	JDCA,	Stückliste
	4-3	JDCA,	parts list

2.) Gerätestückliste/ cabinet parts (Blatt/ page 4-1) :

13	4822 443 63213	Liftklappe/ lift flap (/01/59)
20	4822 443 40981	Bedienteil/ operating panel (/01)
20	4822 138 57291	Bedienteil/ operating panel (/59)
22	4822 443 63212	Deckel/ cover (/01/59)

Safety regulations require that the set be restored to its original condition and the parts which are identical with those specified be used.

D
Subject to modification
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DC1 C2	2010 A5	2031 C7	3011 C7	3017 A9	3026 A3	3032 C8	3040 C1	3061 A4	6005 C6	7030 C8	9001 C1	9007 C3	9013 A6	9019 B7	9025 B9
1001 A7	2011 C3	2043 C8	3012 C6	3018 A8	3027 B3	3033 C8	3041 C8	5000 C4	6006 B6	7031 C8	9002 C2	9008 B3	9014 B6	9020 B8	9026 C9
1002 A7	2020 C4	3001 C7	3013 A8	3020 A3	3028 A4	3034 C8	3042 C1	6001 C4	6020 B3	7101 A5	9003 B2	9009 A4	9015 C6	9021 B8	9027 C8
2003 A6	2021 A3	3002 C7	3014 A8	3021 B3	3029 B3	3035 C4	3050 B2	6002 C5	6032 C7	7102 B3	9004 C3	9010 B4	9016 C7	9022 B8	
2004 A6	2022 A3	3006 C2	3015 A8	3022 A3	3030 C8	3036 C6	3051 C1	6003 C5	6050 C2	7103 B2	9005 C3	9011 A5	9017 B7	9023 A8	
2005 A7	2030 C4	3007 C2	3016 A7	3023 A3	3031 C8	3037 C6	3052 C2	6004 C5		7120 A3	9006 B3	9012 A6	9018 B7	9024 B9	

1 2 3 4 5 6 7 8 9 10

A B C

OPERATING JDCA

BREAKING JUMPER	PRESENT	NOT PRESENT
A	6 TIMERS	4 TIMERS
B	LINEAR TAPE COUNTER	NON LINEAR TAPE COUNTER
C	DATA RAM ON	DATA RAM OFF
D	VARIABLE SEARCH	FIXED SEARCH
E	OSD BLUE BACKGROUND	OSD BLACK BACKGROUND

PCB 03100
T28/037

OPERATING JDCA

1001	B12
1002	D12
2003	D13
2004	D12
2005	D13
2010	B10
2011	B11
2020	G4
2021	G6
2022	G7
2030	C8
2031	C6
2043	D18
3001	D5
3002	E5
3006	E5
3007	F5
3011	D5
3012	E5
3013	H7
3014	H8
3015	H8
3016	H9
3017	H7
3018	L8
3020	G4
3021	F4
3022	G6
3023	G7
3026	H5
3027	H5
3028	G9
3029	G5
3030	C5
3031	B5
3032	C5
3033	C7
3034	C8
3035	B8
3036	C9
3037	D6
3040	O8
3041	O8
3042	O9
3050	D16
3051	D15
3052	D15
3060	B4
3061	G9
5000	A10
6001	N12
6002	N12
6003	M12
6004	M12
6005	L12
6006	L12
6010	A3
6020	G5
6031	C6
6032	C7
6050	D15
7030	B5
7031	C8
7101	B11
7102	E12
7103	G3
7120	H6
7120	H8

4B4.JFB-DE 9DC1 -28a
12B4.JFB-DE 1DC1 +5a
5B4.JFB-DE 8DC1 +5bat
6B4.JFB-DE 7DC1
6010 BAT85
ON JFB-DE
3.6V 1988 270 3060
5000 22µ
2010 10n
2011 150µ
7101 TMP47C1670N
1001 4.19MHz 33p 33p
10B4.JFB-DE 3DC1 POR 3030 22k 4.7V
7030 BC558C 5.1V 4.9V 3031 4k7
3032 1k
6031 1N4148
6032 1N4148
2031 220n
3033 2k2
7031 BC548B 4.8V 0V
3034 4k7
3035 4k7
2030 10n
3036 10k
RESET 1 -27.7V
INIT 43 5.1V
HOLD 22 5.1V
3037 22k
11B4.JFB-DE 2DC1 3001 100 SDA2 R61 25 5.1V
9B4.JFB-DE 4DC1 3002 100 SCL2 R60 24 5.1V
8B4.JFB-DE 5DC1 3006 100 CLKD SCL 47
7B4.JFB-DE 6DC1 3007 100 DATD SO 46
S1 45
3011 3012
PWM 23
WTO 38
TEST 18
INT2 41 5.1V
3061 10k
7103 IR-REC
3020 15
3021 15
2020 220µ
3029 10k
6020 SD101A
2021 1n5
3022 300k
7120-2A LM393
3023 300k
2022 1n5
7120-2B LM393
3028 10k
3027 10k
3026 10k
3017 4k7 3013 1k8 3014 1k8 3015 1k8 3016 4k7
P2.3 36 5.1V
P2.0 33
P2.1 34
P2.2 35
R7.0 37 5.1V
T1 44
T2 42
3018 10k
R6.2 27 +5V
R6.3 26 A
P1.0 28 B
P1.1 29 C
P1.2 30 D
P1.3 31 E
K03 17 0V
K02 16 0V
K01 15 0V
3040 1k8 3041 1k8 3042 1k8
32
X IN 19 2.2V
X OUT 20 2.2V
K0.0 14 5V
X IN 39 2.3V
X OUT 40 2.5V
32kHz 1002
2004 15p
2003 10p
2005 50p
AFC 2043 100n 12DC1 1B4.JFB-DE
6050 BZX55/C5V1
3052 100 3051 100 3050 4k7
3.5V AC 10DC1 3B4.JFB-DE
3.5V AC 2B4.JFB-DE 11DC1
7102 12-MT-48GK
33 34 1 2
G0 63 -27.5V o 4
G1 62 -27.5V p 5
G2 61 d 6
G3 60 e 7
RB3 59 1G 8
RB2 58 2G 9
RB1 57 3G 10
RB0 56 4G 11
RA3 55 5G 12
RA2 54 12G 13
RA1 53 11G 14
RA0 52 10G 15
R33 51 9G 16
R32 50 8G 17
R31 49 7G 18
R30 48 6G 19
R53 13 a 31
R52 12 b 30
RC3 5 c 23
RC2 4 l 22
RC1 3 -27.5V j 21
RC0 2 m 20
i 28
1 n 27
2 f 26
3 h 25
4 g 24
5 k 29
6

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G
a	a	a	a	a	a		1a	9a	11a	–	–	
b	b	b	b	b	b	3bc	1b	9b	11b	–	–	–
c	c	c	c	c	c	–	1c	9c	11c	–		–
d	d	d	d	d	d	C	1d	9d	11d	PM	–	–
e	e	e	e	e	e	P	1e	9e	11e	VPS	–	–
f	f	f	f	f	–	1f	9f	11f	–	–	–	
g	g	g	g	g	3g	1g	9g	11g	–	–	VCR	
h	h	h	h	h	–	2g	10g	12g	–	–	–	
i	i	i	i	i	–	2a	10a	12a	–		–	
j	j	j	j	j	–	2e	10e	12e	–		–	
k	k	k	k	k	–	2b	10b	12b	–	–	–	
l	l	l	l	l	–	2c	10c	12c	–		–	
m	m	m	m	m	TIMER	2d	10d	12d	LP	–	–	
n	n	n	n	n	–	2f	10f	12f	–		–	
o	DP	DP	DP	DP	DP	–		–	col1	2		–
p	–	–	–	–	–	–	M	–	col2	OTR	–	–

DP

1G 2G 3G 4G 5G 6G 7G
DIG3 DIG2 DIG1
C P TIMER
M
VCR 2 OTR VPS LP
DIG12 DIG11 DIG10 DIG9
12G 11G 10G 9G 8G

REWIND STILL DOWN
PLAY STOP TIMER
EJECT STANDBY
WIND UP RESET
STORE INSTALL REC
SELECT SEARCH

6006 1N4148
6005 1N4148
6004 1N4148
6003 1N4148
6002 1N4148
6001 1N4148
R51 11
R50 10
R43 9 -24.8V
R42 8
R41 7
R40 6

7102 3mS 0.25ms 35V
8-1G
9-2G
10-3G
11-4G
12-5G
13-12G
14-11G
15-10G
16-9G
17-8G
18-7G
19-6G

FEATURE MATRIX

BREAKING JUMPER	PRESENT	NOT PRESENT
A	6 TIMERS	4 TIMERS
B	LINEAR TAPE COUNTER	NON LINEAR TAPE COUNTER
C	DATA RAMON	DATA RAM OFF
D	VARIABLE SEARCH	FIXED SEARCH
E	OSD BLUE BACKGROUND	OSD BLACK BACKGROUND

V MEASURED IN PLAYBACK

PRS.06779
T-08 035

CS 32 036

(D) JDC Einstellungen

Uhrenfrequenzabgleich (2005)
- Gerät vom Netz trennen.
- Frequenzzähler an Pin 33 von 7101 anschliessen.
- Die Tasten STORE, SEARCH und TIMER gleichzeitig drücken.
- Gerät mit Netz verbinden.
- Mit Massekabel mindestens 14x an R3006 antippen.
- Das Display des Gerätes muss finster sein und am Frequenzzähler liegt ein Rechtecksignal mit 5 V an.
- C2005 auf 47,36328 msec ± 120 nsec einstellen.

(F) JDC Réglages

Réglage de la fréquence d'horloge (2005)
- Déconnecter l'appareil du secteur.
- Brancher le fréquencemètre à la broche 33-7101.
- Pression simultanée des touches "mémorisation", "reserche" et "minuterie".
- Mettre l'appareil au secteur.
- A l'aide du câble de masse, toucher au moins 14x R3006.
- L'afficheur doit être noir, et sur le fréquencemètre on mesure un signal rectangulaire de 5V.
- Ajuster C2005 à 47,36328 ms ± 120 ns.

(I) Regolazioni JDC

L'accordo frequenza d'orologio (2005)
- staccare l'apparecchio dall'alimentazione
- collegare il contatore di frequenza a Pin 33 di 7101
- premere contemporaneamente i tasti "STORE, SEARCH,TIMER"
- collegare l'apparecchio all'alimentazione
- con un puntale collegato a massa, toccare 14 volte la R3006
- il display diventa buio
- una forma d'onda quadra con ampiezza 5V viene applicata al contatore
- regolare C2005 per avere 47,36328 msec ± 120 nsec

(GB) JDC Adjustments

Setting the clock frequency (2005)
- Disconnect the set from the mains.
- Connect a frequency counter to pin 33 of 7101.
- Press the keys "STORE", "SEARCH" and "TIMER" simultaneous.
- Connect the set to the mains.
- Tip R3006 at least 14 times with the earth cable.
- The display of the set should be dark and a 5 V squarewave signal has been applied to the frequency counter.
- Set C2005 at 47.36328 ms ± 120 ns.

(NL) JDC Instellingen

Instellen van de klokfrequentie (2005)
- Apparaat van het lichtnet scheiden.
- Frequentiemeter aan pen 33 van 7101 aansluiten.
- De toetsen "STORE", "SEARCH" en "TIMER" gelijktijdig drukken.
- Apparaat op lichtnet aansluiten.
- Met massakabel minstens 14x aan R3006 aantippen.
- Het display van het apparaat moet donker zijn en aan de frequentiemeter ligt een blokvormig signaal met 5 V aan.
- C2005 op 47,36328 ms ± 120 ns instellen.

(E) Ajustes JDC

Compensación frecuencia del reloj (2005)
- Desconecte el aparato de la red.
- Conecte el contador de frecuencia al Pin 33 de 7101.
- Pulse las teclas STORE, SEARCH y TIMER simultaneamente.
- Conecte el aparato a la red.
- Toque ligeramente al menos 14 veces R 3006 con un cable conectado a masa, a fin de conseguir que el display quede apagado.
- Una vez apagado el display, el Pin 33 entregará una señal TTL al contador de frecuencia.
- Ajuste C2005 hasta obtener una lectura de 47,36328 msec ± 120 nsec.

Operating panel JDCA

MISCELLANEOUS

	4822 276 11349	Keys
	4822 267 50651	Connector 12 pin
7103	4822 218 10216	IR-Receiver

CRYSTALS

1001	4822 242 72574	4.19 MHz
1002	4822 242 72892	32.768 kHZ

CAPACITORS

2003	4822 122 33847	10 pF	50 V
2004	4822 122 10462	15 pF	
2005	4822 125 50412	Trimmer 7,5pF-50pF	
2010	4822 122 10177	10 nF	25 V
2011	4822 124 21454	150 µF	16 V
2020	4822 124 41581	220 µF	16 V
2021	4822 121 51298	1,5 nF	
2022	4822 121 51298	1,5 nF	
2030	4822 122 10177	10 nF	25 V
2031	4822 122 10463	220 nF	63 V
2043	5322 121 42386	100 nF	63 V
2051	4822 124 22799	1 µF	63 V

RESISTORS

3001	4822 116 52175	100 Ω
3002	4822 116 52175	100 Ω
3006	4822 116 52175	100 Ω
3007	4822 116 52175	100 Ω
3011	4822 116 52283	4.7 kΩ
3012	4822 116 52283	4.7 kΩ
3013	4822 116 52249	1.8 kΩ
3014	4822 116 52249	1.8 kΩ
3015	4822 116 52249	1.8 kΩ
3016	4822 116 52283	4.7 kΩ
3017	4822 116 52283	4.7 kΩ
3018	4822 116 52233	10 kΩ
3020	4822 116 52182	15 Ω
3021	4822 116 52182	15 Ω
3022	4822 116 52848	200 kΩ
3023	4822 116 52848	200 kΩ
3026	4822 116 52759	10 kΩ
3027	4822 116 52759	10 kΩ
3028	4822 116 52233	10 kΩ
3029	4822 116 52233	10 kΩ
3030	4822 116 52257	22 kΩ
3031	4822 116 52283	4.7 kΩ
3032	4822 116 52204	1 kΩ
3033	4822 116 52256	2.2 kΩ
3034	4822 116 52283	4.7 kΩ
3035	4822 116 52283	4.7 kΩ
3036	4822 116 52233	10 kΩ
3037	4822 116 52257	22 kΩ
3040	4822 116 52249	1.8 kΩ
3041	4822 116 52249	1.8 kΩ
3042	4822 116 52249	1.8 kΩ
3050	4822 116 52283	4.7 kΩ
3051	4822 116 52175	100 Ω
3052	4822 116 52175	100 Ω
3061	4822 116 52233	10 kΩ

COILS

5000	4822 157 52286	

DIODES

6001	4822 130 30621	1N4148 (NSC)
6002	4822 130 30621	1N4148 (NSC)
6003	4822 130 30621	1N4148 (NSC)
6004	4822 130 30621	1N4148 (NSC)
6005	4822 130 30621	1N4148 (NSC)
6006	4822 130 30621	1N4148 (NSC)
6020	4822 130 81268	SD101A
6031	4822 130 30621	1N4148 (NSC)
6032	4822 130 30621	1N4148 (NSC)
6050	4822 130 34233	BZX55-C5V1 (TEG)

TRANSISTORS

7030	5322 130 60068	TBC558C
7031	4822 130 40937	TBC548B

IC's

7101	4822 209 62453	TMP47C1670N JSDC1-3U
7102	4822 130 90839	12-MT-48GK
7120	4822 209 80797	LM393N